

Appl. No. UP13
Amdt. Dated 1-13-06
Reply to Office Action of 10-13-05

Amendments to the Claims

The current listing of claims replaces all previous versions of the claims.

Listing of Claims

1. (Currently Amended) A gimbal assembly for a water vehicle outdrive system, said assembly comprising:

control means for generating a user input and directing the outdrive system to rotate freely in a select radial path so that the water vehicle can be propelled in a corresponding direction;

a gimbal section operably connected to said control means and for cooperating therewith to selectively position the outdrive system corresponding to said user input; and

support means for assisting to maintain said gimbal section at a substantially stable position during operating conditions, said support means being secured to a water vehicle transom and said gimbal section respectively, said support means being selectively operable independently of said control means;

wherein said support means comprises

a bracket including a plurality of elongated members secured along the ~~boat~~water vehicle transom and engageable with said gimbal section, said plurality of members being spaced along the water vehicle transom and converging rearwardly toward the outdrive system;

wherein said gimbal section further comprises

a steering gear operably connected to said control means and for cooperating therewith to direct the outdrive system between select positions.

2. (Previously Amended) The gimbal assembly of claim 1, wherein said gimbal section comprises:

an upper housing secured to the water vehicle transom and extending rearwardly therefrom, said upper housing comprising

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a plurality of shafts and a beveled gear connected thereto and for transferring a first rotational motion of one said plurality of shafts to a second rotational motion of another said plurality of shafts wherein the first rotational motion is disposed substantially orthogonal to the second rotational motion.

3. (Previously amended) The gimbal assembly of claim 2, wherein said gimbal section further comprises:

a universal joint connected to another said plurality of shafts with said gimbal assembly for transmitting a non-linear rotation thereof so that the outdrive system can be rotated in clockwise and counter-clockwise directions.

4. (Canceled)

5. (Canceled)

6. (Previously amended) The gimbal assembly of claim 1, wherein said support means comprises:

a plurality of hydraulic pumps and a plurality of hydraulic cylinders operably connected thereto, said plurality of hydraulic cylinders being connected to said gimbal section and for selectively pivoting the outdrive system between raised and lowered positions as said plurality of hydraulic cylinders are extended and retracted respectively.

7. (Original) The marine gimbal assembly of claim 1, wherein the radial path extends at least 180 degrees and about a plurality of quadrants.

8. (Currently Amended) A gimbal assembly for a water vehicle outdrive system, said assembly comprising:

control means for generating a user input and directing the outdrive system to rotate freely in a select radial path extending at least 90 degrees and about a quadrant so that the water vehicle can be propelled in a corresponding direction;

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a gimbal section operably connected to said control means and for cooperating therewith to selectively position the outdrive system corresponding to said user input; and

support means for assisting to maintain said gimbal section at a substantially stable position during operating conditions, said support means being secured to a water vehicle transom and said gimbal section respectively, said support means being selectively operable independently of said control means;

wherein said support means comprises

a bracket including a plurality of elongated members secured along the boat transom and engageable with said gimbal section, said plurality of members being spaced along the water vehicle transom and converging rearwardly toward the outdrive system.

9. (Previously amended) The gimbal assembly of claim 8, wherein said gimbal section comprises:

an upper housing secured to the water vehicle transom and extending rearwardly therefrom, said upper housing comprising

a plurality of shafts and a beveled gear connected thereto and for transferring a first rotational motion of one said plurality of shafts to a second rotational motion of another said plurality of shafts wherein the first rotational motion is disposed substantially orthogonal to the second rotational motion.

10. (Previously amended) The gimbal assembly of claim 9, wherein said gimbal section further comprises:

a universal joint connected to another said plurality of shafts with said gimbal assembly transmitting a non-linear rotation thereof so that the outdrive system can be rotated in clockwise and counter-clockwise directions.

11. (Previously amended) The gimbal assembly of claim 8, wherein said gimbal section further comprises:

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a steering gear operably connected to said control means and for cooperating therewith to direct the outdrive system between select positions.

12. (Canceled)

13. (Previously amended) The gimbal assembly of claim 8, wherein said support means comprises:

a plurality of hydraulic pumps and a plurality of hydraulic cylinders operably connected thereto, said plurality of hydraulic cylinders being connected to said gimbal section and for selectively pivoting the outdrive system between raised and lowered positions as said plurality of hydraulic cylinders are extended and retracted respectively.

14. (Canceled)

15. (Canceled)

16. (Canceled)

17. (Canceled)

18. (Canceled)

19. (Previously submitted) A gimbal assembly for a water vehicle outdrive system, said assembly comprising:

a trim plate;

lower gimbal oriented in a substantially vertical position, said lower gimbal having a central point;

a lower horizontal housing operably connected to said lower gimbal;

a plurality of hydraulic cylinder shafts attached to said trim plate in such a manner such that said lower gimbal can be moved to a vertical position while said

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central point of said lower gimbal remains at a static location, said lower gimbal raising said lower horizontal housing vertically away from a water surface for providing ground clearance when the water vehicle is out of the water;

wherein small vertical movements of said lower horizontal housing affect the attitude of the water vehicle when in motion;

a steering gear operably connected to said lower gimbal in such a manner that said steering gear can horizontally adapt said lower gimbal while said central point of said lower gimbal remains at a static location; and

said lower gimbal being repeatedly rotatable along a path extending at least 180 degrees defined between a forward position and a reverse position while said central point of said lower gimbal remains at a static position.